NEW MEXICO
ENVIRONMENT DEPARTMENT

Surface Water Quality Bureau

04

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Original via UPS -- Copy via Electronic Mail

September 19, 2013

Mr. William K. Honker, Director
Water Quality Protection Division (6WQ)
U. S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: State Certification

Dear Mr. Honker:

Enclosed, please find the state certification for the following proposed National Pollutant Elimination System (NPDES) permit:

U.S. Department of Energy and Los Alamos National Security, LLC - Los Alamos National Laboratory - NM0028355

If any, comments and conditions are enclosed on separate sheets.

U.S. Environmental Protection Agency (USEPA) proposes to regulate discharges under the above-referenced NPDES Individual Permit. A state Water Quality Certification is required by the federal Clean Water Act (CWA) §401 to ensure that the action is consistent with state law (New Mexico Water Quality Act, sections 74-6-1 through 74-6-17, New Mexico Statutes Annotated (NMSA) 1978) and complies with state Water Quality Standards [*State of New Mexico, Standards for Interstate & Intrastate Surface Waters, New Mexico Water Quality Control Commission, 20.6.4 New Mexico Administrative Code (NMAC)*], the Water Quality Management Plan/Continuing Planning Process, including Total Maximum Daily Loads (TMDLs), and the Antidegradation Policy.

Pursuant to State regulations for permit certification (Section 20.6.2.2001 NMAC), USEPA jointly with NMED issued a public notice of the draft permit and announced a public comment period posted on the NMED web site www.nmenv.state.nm.us/swqb/WQA/Notice on June 28, 2013. The public comment period ended on August 13, 2013. NMED received 49 comments which were submitted prior to the close of the comment period. These comments were considered in the development of this certification. NMED will send a copy of this conditional certification to those members of the public who submitted comments to the department under separate correspondence.

Sincerely,

James Hogan, Bureau Chief
Surface Water Quality Bureau

cc: (w/enclosures)

-Ms. Diane Smith, USEPA (6WQ-NP) via e-mail
-Mr. Brent Larsen, USEPA (6WQ-PP) via e-mail
-Mr. Kevin W. Smith, Manager, U.S. Department of Energy (USDOE), Los Alamos Site Office (LASO), MS A316, 528 35th Street, Los Alamos, NM 87545 via Certified Mail (7011 3500 0000 0326 0488)
-Ms. Alison Dories, Division Leader, Environmental Protection Division, Los Alamos National Security, LLC (LANS), P.O. Box 1663, MS K491, Los Alamos, NM 87545-0001 via Certified Mail (7011 3500 0000 0326 0471)
-Mr. Gene Turner, DOE/AIP/POC via e-mail
-Mr. Mike Saladen, LANS, ENV-RCRA via e-mail

Mr. Ron Curry, Regional Administrator
Environmental Protection Agency
1445 Ross Avenue
Dallas, TX 75202-2733

09/19/2013

STATE CERTIFICATION

RE: U.S. Department of Energy and Los Alamos National Security, LLC - Los Alamos National Laboratory - NM0028355

Dear Mr. Curry:

The New Mexico Environment Department has examined the proposed NPDES permit above. The following conditions are necessary to assure compliance with the applicable provisions of the Clean Water Act Sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law. Compliance with the terms and conditions of the permit and this certification will provide reasonable assurance that the permitted activities will be conducted in a manner which will not violate applicable water quality standards and the water quality management plan and will be in compliance with the antidegradation policy.

The State of New Mexico

( ) certifies that the discharge will comply with the applicable provisions of Sections 208(e), 301, 302, 303, 306 and 307 of the Clean Water Act and with appropriate requirements of State law

(X) certifies that the discharge will comply with the applicable provisions of Sections 208(e), 301, 302, 303, 306 and 307 of the Clean Water Act and with appropriate requirements of State law upon inclusion of the following conditions in the permit (**see attachments**)

( ) denies certification for the reasons stated in the attachment

( ) waives its right to certify

In order to meet the requirements of State law, including water quality standards and appropriate basin plan as may be amended by the water quality management plan, each of the conditions cited in the draft permit and the State certification shall not be made less stringent.

The Department reserves the right to amend or revoke this certification if such action is necessary to ensure compliance with the State's water quality standards and water quality management plan.

Please contact Bruce J. Yurdin at (505) 827-2795, if you have any questions concerning this certification. Comments and conditions pertaining to this draft permit are attached.

Sincerely,

James Hogan, Chief
Surface Water Quality Bureau

U.S. Department of Energy and Los Alamos National Security, LLC
Los Alamos National Laboratory
NM0028355

State of New Mexico
Conditional Certification of the Proposed NPDES Permit
September 19, 2013

Conditions of State Certification

The following revisions to the draft NM0028355 National Pollutant Discharge Elimination System (NPDES) permit are necessary to assure that discharges allowed under State of New Mexico water quality standards (WQS) adopted in accordance with §303 of the Clean Water Act (CWA), 33 U.S.C. §1323, and the New Mexico Water Quality Act, Chapter 74, Article 6 NMSA 1978. The State of New Mexico (State) WQS are enacted through the Standards for Interstate and Intrastate Surface Waters, New Mexico Water Quality Control Commission (WQCC), and 20.6.4 New Mexico Administrative Code (NMAC) as amended by the WQCC and approved by the United States Environmental Protection Agency (USEPA) as of June 5, 2013.

Permitted Discharge Locations & Water Quality Segments

This proposed NPDES permitting action would authorize the U.S. Department of Energy and Los Alamos National Security, LLC (hereafter "Permitees") to discharge from eleven (11) outfalls at the Los Alamos National Laboratory (LANL) site to State WQS Segments found in 20.6.4.126 and 20.6.4.128 NMAC (hereafter "Segment 20.6.4.126" and "Segment 20.6.4.128") which are tributaries to the Rio Grande in the Rio Grande Basin. Outfalls 001 (001) and 03A027 (027) discharge to Sandia Canyon in Segment 20.6.4.126. Outfall 03A199 (199) discharges to a tributary in Segment 20.6.4.128 thence to Sandia Canyon in Segment 20.6.4.126. Outfall 13S discharges to Cañada del Buey; Outfall 05A055 (055) discharges to Cañon de Valle; Outfalls 051, 03A022 (022) and 03A181 (181) discharge to Mortandad Canyon; Outfall 03A048 (048) discharges to Los Alamos Canyon; and Outfalls 03A113 (113) and 03A160 (160) discharge to Ten Site Canyon, all in Segment 20.6.4.128.

These two WQS segments thus receive all proposed discharges from the above discharge locations. Currently, Title 20, Chapter 6, Section 4 describes in part, the WQS designated uses and numeric and/or narrative criteria applicable to these segments.

20.6.4.126 NMAC describes Segment 20.6.4.126 as, "*Perennial portions of...Sandia canyon from Sigma canyon upstream to LANL NPDES outfall 001... A. Designated Uses: coldwater aquatic life, livestock watering, wildlife habitat and secondary contact. B. Criteria: the use-specific numeric criteria set forth in 20.6.4.900 NMAC are applicable to the designated uses.*" 20.6.4.126 NMAC (2013).

20.6.4.128 NMAC describes Segment 20.6.4.128 as

> *Ephemeral and intermittent portions of watercourses within lands managed by U.S. department of energy (DOE) within LANL, including but not limited to: Mortandad canyon, Cañada del Buey...portions of Cañon de Valle, Los Alamos canyon, Sandia canyon...not specifically identified in 20.6.4.126 NMAC. (Surface waters within lands scheduled for transfer from DOE to tribal, state or local authorities are specifically excluded.) A. Designated Uses: livestock watering, wildlife habitat, limited aquatic life and secondary contact. B. Criteria: the use-specific criteria in 20.6.4.900 NMAC are applicable to the designated uses, except that the following segment-specific criteria apply: the acute total ammonia criteria set forth in Subsection K of 20.6.4.900 NMAC (salmonids absent).*

20.6.4.128 NMAC (2013).

State WQS 20.6.4.12 NMAC (Compliance with Water Quality Standards) includes:

> *Compliance Schedules: It shall be the policy of the commission to allow on a case-by-case basis the inclusion of a schedule of compliance in a NPDES permit issued to an existing facility. Such schedule of compliance will be for the purpose of providing a permittee with adequate time to make treatment facility modifications necessary to comply with water quality based permit limitations determined to be necessary to implement new or revised water quality standards or wasteload allocation. Compliance schedules may be included in NPDES permits at the time of permit renewal or modification and shall be written to require compliance at the earliest practicable time. Compliance schedules shall also specify milestone dates so as to measure progress towards final project completion (e.g., design completion, construction start, construction completion, date of compliance).*

20.6.4.12.G NMAC (2013).

As will be discussed further below, additional state and federal laws, codes, and regulations will or may apply.

Applicable State and Federal Laws

Section 401 (a) of the CWA generally provides that any applicant for a federal permit or license must obtain from any state where the activity or discharge is to be located a certification that the activity will not cause or contribute to degradation of state water quality. 33 U.S.C. §1431 (a). Additionally, Section 401 (d) of the CWA provides that:

> "[a]ny certification provided under this section ***shall set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure*** that any applicant for a Federal license or permit ***will comply with any applicable effluent limitations and other limitations***, under section 301 or 302 of this title, standard of performance under section 306 of this title, or prohibition, effluent standard, or pretreatment standard under section 307 of this title, ***and with any other appropriate requirement of State law set forth in such certification***, and shall become a condition on any Federal license or permit subject to the provisions of this section." (emphasis added)

33 U.S.C. §1341 (d) (emphasis added).[1] Respectively, 20.6.2.2001 NMAC, which enacts NMSA 1978, §74-6-5, provides that, "[t]he purpose of such certification is to reasonably ensure that the permitted activities will be conducted in a manner that will comply with applicable water quality standards, including the antidegradation policy, and the statewide water quality management plan." 20.6.2.2001.A NMAC. In addition to these, other federal code provisions apply to how, when and to what extent the state can issue its certification. NPDES regulations found at 40 CFR 122.44 require that permit, "[l]imitations must control all pollutants or pollutant parameters…which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." 40 C.F.R. 122.44 (d)(1)(i). NPDES regulations at 40 CFR 122.44 generally provide that the State requesting a condition in an NPDES permit should first consider existing controls on point and non-point sources, variability of the pollutant, sensitivity of spices to the toxin(s), and the potential dilution of the receiving waters. 40 CFR 122.44 (d)(1)(ii). Next, the USEPA must then include the effluent limit for the specific pollutant. 40 CFR 122.44 (d)(1)(iii)-(iv). Additionally, where the state proposes a term or condition that is more stringent than included in the draft permit, the state must cite the specific CWA or state law reference on which it is based. 40 CFR 124.53(e)(2).

[1] See also *PUD No. 1 of Jefferson Cnty. v. Washington Dep't of Ecology*, 511 U.S. 700, 712 (1994) for interpretations of implementation of Section 401(d) of the CWA, 33 U.S.C. §1341 (d). Available online at http://www.law.cornell.edu/supct/html/92-1911.ZS.html.

State Specific Conditions

Pursuant to Section 401 of the CWA, related federal code provisions, and state laws and regulations, the State can: 1) certify that the proposed activity will meet state water quality standards; 2) certify the permit or license with specific conditions intended to prevent any discharge of pollutants that would cause or contribute to exceedances of state water quality standards or applicable law; 3) deny the proposed license or action; or 4) take no action within the allowed time thus waiving any objection or opposition to the activity. 33 U.S.C. §1341; 40 C.F.R. §121.2; NMSA 1978, §74-6-5; 20.6.2.2001 NMAC.

The State, pursuant to the authorities listed above and below, herein requests that the USEPA include the following conditions as part of the next LANL NPDES permit. Where possible the State has provided suggested terms, notes, and/or examples that USEPA can utilize in enacting these permissible conditions. The following conditional certification also, where appropriate, includes references to *Procedures for Implementing NPDES Permits in New Mexico* or "NMIP." State of New Mexico, Statewide Water Quality Management Plan and Continuing Planning Process (WQMP), approved by the WQCC on May 10, 2011 and USEPA on December 23, 2011. This document states, among other things, "...as the current NPDES permitting authority for NM, EPA Region 6 develops effluent limitations and schedules of compliance in accordance with its Procedures for Implementing NPDES Permits in New Mexico, which is based on applicable federal regulations and guidance." The current version of the NMIP was prepared by USEPA Region 6 Permits Branch in consultation with the NMED Surface Water Quality Bureau is dated March 15, 2012.

Condition #1 (PCB Monitoring and Effluent Limitations)

USEPA must revise the draft permit to include a monitoring and compliance maximum discharge limit for Polychlorinated biphenyls (PCBs) of 0.00064 micrograms per Litter (µg/L). The State will require that monitoring and reporting of PCBs be performed in accordance with USEPA published Method 1668C or later revisions.[2] Pursuant to 20.6.4.14.A (3) NMAC, Method 1668C is a State approved method for testing surface wastewater discharges. Additionally, Method 1668C has a Minimum Quantification Level (MQL) set at or below the applicable and limiting State WQS found in 20.6.4.900.J (2) NMAC. Further supporting this requirement is that **Method 1668C is the only known and least restrictive and readily available laboratory wastewater sampling method that can reasonably assure that the proposed discharges do not exceed the WQS limits of 20.6.4.900.J (2) NMAC**. As a valid state law condition and limitation pursuant to Section 401 (d) (33 U.S.C. §1341 (d)) and 40 C.F.R. 124.53(e)(3), and in accord with 20.6.2.2001.B NMAC, USEPA must include this requirement in the final permit. 33 U.S.C. 1341 (a); 40 C.F.R. §124.53 (a).

USEPA will need to determine how footnotes or other language in the Final Permit should best be changed to meet this condition however the State provides the following suggestions on how USEPA can incorporate the PCB conditions to certification. Those words suggested to be removed are notated with strikethrough type.

(1) For Outfalls 001, 13S, and 051, the revisions to the footnotes in Part I.A of the Draft Permit could be changed to the following:

EPA published congener Method 1668C and detection limits ~~levels~~ ~~could~~ [shall] be used. ~~for reporting purposes. But, prior to the promulgation of Method 1668, the 0.2 µg/l minimum quantification level listed in Appendix to Part II shall be used for compliance purposes. Report "0" in the DMR if analytical result of total PCB is less than 0.2 µg/l, but note the analytical result of total PCB in the comment area.~~
[The permittee is allowed to develop an effluent specific MDL in accordance with Appendix B of 40 CFR Part 136 (instructions in Part II.A of this permit).]

[2] Method 1668C Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by HRGC/HRMS, U.S. EPA, Office of Water, 2010, EPA Document No. EPA-820-R-10-005. Available online from U.S. EPA at http://water.epa.gov/scitech/methods/cwa/upload/M1668C_11June10-PCB_Congeners.pdf.

(2) For Outfall 13S, the following footnote would not require a change:

If the wastewater is discharged at other outfalls, it shall comply with effluent limitations and monitoring requirements for PCBs as established for Outfall 13S.

(3) For Outfall 027 (a.k.a. 03A027), the PCB portions of footnote 2 of the Part I.A of the Draft Permit, which states "*Total PCB effluent limitations established at Outfall 13S applies when effluent from Outfall 13S is rerouted and discharged at Outfall 03A027,*" could be separated from the *E. coli* (#cfu/100 ml) requirements in footnote 2.

(4) Conditions for the reuse of treated wastewaters from LANL Sanitary Waste Water System (SWWS) at other outfalls is a Footnote for Outfall 13S in Part I.A of the Draft Permit, as follows, "*If the wastewater is discharged at other outfall, it shall comply with effluent limitations and monitoring requirements for PCBs as established for Outfall 13S.*" This condition should be repeated in Part I.A of the Final Permit for each outfall.

(5) Part II, A. "Minimum Quantification Level (MQL)" of the Draft Permit would not require a change.

(6) Part II, F. could be changed to the following:

F. TEST METHODS

The following methods may be used for analysis under this permit:

Methods Listed in 40 CFR 136.3
~~*EPA Methods 1668A or later revision.*~~
EPA Methods 904.0 and 903.1
Nitroaromatics and Nitramines by High Performance Liquids Chromatography: SW846 Method 8330 or 8330A.
Microwave Digestion: SW846 Method 3015
SW 846 Method 7742
Hot Plate Digestion: EPA Method 200.2

The following method shall be used for analysis under this permit to meet required MQLs:

EPA Method 1668C or later revision

(7) Appendix A of Part II of the Draft Permit would need to be changed to incorporate conditions of this certification. For example, Appendix A could be changed to the following:

The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	*MQL µg/l*
*PCBs *2*	~~*0.2*~~ *equal to or less than 0.00064*

Associated Footnote *2 Appendix A of Part II of USEPA Draft Permit would also need to be changed, for example:

Detectable levels defined in Method 1668 must be used. ~~*for reporting purposes. MQL 0.2 µg/l may be used by EPA for compliance purpose.*~~

Additional Explanation on Conditions Related to Polychlorinated Biphenyls (PCBs)

Among the information presented in USEPA Fact Sheet prepared June 26, 2013, language in the Draft Permit, and Public and Permittee comments, were issues concerning PCB monitoring, effluent limitations, reporting and required methods in the permit action. Below, NMED provides an explanation for why specific PCB monitoring conditions are necessary for State certification. The following table summarizes the applicable PCB numeric criteria from 20.6.4.900.J(2) NMAC for the receiving waters of this permit action:

Pollutant	Wildlife Habitat	Aquatic Life			Type
		Acute	Chronic*	Human Health – Organism Only (HH-OO)	
PCBs	0.014 µg/L	2 µg/L	0.014 µg/L	0.00064 µg/L	Chronic, Persistent

*Note: * Chronic Aquatic Life Criteria does not apply to Segment 20.6.4.128 with a designated use of Limited Aquatic Life*

As PCBs are identified as a persistent pollutant the HH-OO criteria applies to both the coldwater aquatic life use in Segment 20.6.4.126 and the limited aquatic life use in Segment 20.6.4.128, consistent with 20.6.4.11.G NMAC. USEPA reasonable potential analysis in the Fact Sheet determined that the PCB effluent characteristics at Outfalls 001 and 13S have a reasonable potential to exceed State WQS. The point source discharge permit condition is calculated to meet numeric criteria based on a modified harmonic low flow per State WQS 20.6.4.11 NMAC and as consistent with the NMIP.

The following is a summary of a portion of the monitoring and effluent limitation conditions for PCBs in Part I.A of the Draft Permit for Outfall 001, 13S and 051:

		Concentration		Loading		
		Monthly Average	Daily Maximum	Monthly Average and Daily Maximum	Frequency	Sample Type
				lbs/day		
001	Total PCB (µg/l)	0.000642	0.000642	Report	1/Year	24-hr Composite
13S	Total PCB (µg/l)	0.000642	0.000642	Report	1/Year	24-hr Composite
051	Total PCB (µg/l)	Report	Report	***	2/Term	Grab

For Outfall 027, certain effluent limitations and monitoring requirements in the Draft Permit only apply at Outfall 027 when effluent from Outfall 13S is rerouted and discharged at Outfall 027. The following Footnote is in Part I.A for Outfall 027:

Total PCB effluent limitations established at Outfall 13S applies when effluent from Outfall 13S is rerouted and discharged at Outfall 03A027.

Conditions for the reuse of treated wastewater from the LANL SWWS at other outfalls is a Footnote for Outfall 13S in Part I.A of the Draft Permit, as follows:

If the wastewater is discharged at other outfall, it shall comply with effluent limitations and monitoring requirements for PCBs as established for Outfall 13S.

Outfall 051 has not recently discharged and no representative effluent characteristics were submitted in the application for a reasonable potential analysis for this permit action. Consistent with the reasons for the amended State certification dated February 1, 2007 (Amendment #1), a PCB effluent limitation is not required for Outfall 051 as a condition of certification at this time. There had been physical changes to the

facility and post-modification sampling data indicating that there may be no current "reasonable potential" for the discharge to exceed State WQS for PCBs.

As noted above and below, the Aroclor method is not sufficiently sensitive to assure that the Permitees will comply with the applicable effluent limit for PCBs contained within the permit and thus can not be used for monitoring or compliance purposes under state law. The following demonstrates the MDL and MQL limits of several PCB testing methods:

Method	MDL	MQL
EPA Method 608 (Aroclor)	0.065 µg/L	0.02145 µg/L
EPA Method 625	30 µg/L	99 µg/L
SM 6410 B	30 µg/L	99 µg/L
EPA Method 1668C	7-30 pg/L	23-99 pg/L (0.000023-0.000099 µg/L)

Notes: EPA Method 1668 Revision A became Revision C in the May 18, 2012 Federal Register notice of 40 CFR Part 136.

The Aroclor method's MQL is an order of magnitude above the effluent limitation provided in this draft permit as necessary to comply the State WQS. As documented above, the congener method, EPA Method 1668C, is the only method with a sufficiently sensitive detection limit below State WQS for Total PCBs and therefore must be used when it has been determined that PCBs *"are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above"* State WQS. Again, this condition constitutes *"monitoring requirements necessary to assure that any applicant for a Federal license or permit will comply with any applicable effluent limitations"* consistent with the provisions of the CWA Section 401(d). 33 U.S.C. §1341 (d). This condition is also consistent with and addresses many of the Public Comments the State received as part of the State Certification process pursuant to 20.6.2.2001 NMAC. The majority of the comments expressed the need for monitoring requirements appropriate to determine compliance with the PCB effluent limitations of the permit.

In contrast to the majority the State received comments from the Permitees. By their letter dated August 12, 2013, LANL provided four separate arguments to support the use of the PCB congener method (EPA Method 1668C) for reporting purposes but not for enforcement or compliance purposes. As detailed below the State considered each of these arguments but found each insufficient to support LANL's proposition:

1. *"NMED may only include reference methods that are approved by EPA under 40 CFR Part 136 for determining compliance with effluent limitations. 40 CFR 136.1 requires the use of EPA Methods 608 or 625 or Standard Methods 6410.B for determining compliance with effluent limits in NPDES permits."* LANL further cites the May 18, 2012 Federal Register publication of the USEPA decision to defer consideration of inclusion of EPA Method 1668C as a 40 CFR part 136 method in support of this comment.

The State respectfully disagrees. As noted above, the State is requiring this condition in order to assure compliance with the applicable effluent and state water quality limitation which can only be achieved by use of EPA Method 1668C. This conditional action, as previously stated, is consistent with the provisions of the CWA for State Certification at 401(d) and in accordance with 20.6.2.2001 NMAC and Title 20, Chapter 6, Section 4 NMAC.

Furthermore in reviewing USEPA's action in May 2012, to defer adoption of EPA Method 1668C, they included as part of their discussion that "EPA is still evaluating the large number of public comments and intends to make a determination on the approval of this method {1668C} at a later date...[and t]his decision does not negate the merits of this method for the determination of PCB congeners in regulatory programs or for other purposes when analyses are performed by an experienced laboratory." (FR, Vol. 77, No.97, page 29763)

2. *"State law does not require the use of EPA Method 1668 to determine compliance with the PCB effluent limits. The applicable state law requirements, the New Mexico Water Quality Control Commission's water quality standards, 20.6.4.14.A NMAC, specify that:*

   Sampling and analytical methods ***shall conform*** *with methods described in the following references unless otherwise specified by the commission pursuant to a petition to amend these standards: (1) "guidelines establishing test procedures for analysis of pollutants under the Clean Water Act," 40 CFR Part 136, or any test procedures approved or accepted by EPA using procedure provided in 40 CFR 136.3(d), 136.4, and 136.5." (emphasis by LANL)*

The State notes again that use of Method 1668C is authorized under 20.6.4.14.A (3) NMAC and that only this method can assure the state that any discharge from the outfalls will comply with State WQS. Method 1668C is a published method of the USEPA Office of Water and is therefore an appropriate method under the State WQS and must be included in the permit pursuant to Section 401 (d) of the CWA. 33 U.C.S. §1341 (d).

3. *"EPA Method 1668 is not appropriate for use in determining compliance with effluent limits. The method is not sufficiently reliable for compliance determinations."* (LANL then cites from the USEPA Fact Sheet issued concurrently with the proposed permit in which EPA states: *"both Method 1668 and its MQL are not defensible by EPA for compliance purposes."*)

Setting aside for the moment the previously cited text from the Federal Register, in which USEPA referred to the merits of Method 1668C for regulatory programs, the State contends that during the last five-years, under the current NPDES permit, LANL was required to and did effectively monitor and report using a sufficiently low detection limit with USEPA Method 1668C. The State considers any remaining issues on the accuracy, precision and repeatability of Method 1668C as reasonably addressable with adequate laboratory controls and appropriate quality assurance procedures (e.g., accredited performance testing, use of known concentration spikes, laboratory blank correction procedures). In general, analytical methods have acceptance criteria for sample analysis. If there are data validation or interference issues, data may be qualified as estimated and flagged. The data may be determined to be unacceptable, consequently flagged and rejected.

4. *"LANL is the only known facility in New Mexico where the congener method is being used to determine compliance with an NPDES permit limit."*

LANL is correct that it is the only facility where the use of USEPA Method 1668C is required for compliance purposes, however there is a very specific reason for this, LANL is the only facility whose discharge has been shown to have a reasonable potential to exceed State WQS for PCBs. The State also notes that LANL is not the only NPDES permittee in New Mexico subject to the specific use of USEPA Method 1668C. For example, six other NPDES permits are required to use this method for monitoring and reporting only. These discharge to waters where PCBs have been identified as a probable cause of a water quality impairment, but there was insufficient data to determine if the discharge had a reasonable potential to exceed State WQS or may contribute to a listed impairment. Therefore, based on these facts, use of Method 1668C is the least restrictive means known by the State to assure that the proposed activity will not exceed or contribute to the degradation of state water quality.

General Explanation on Conditions #2 and #3 Regarding Current Causes of Impairment for Receiving Waters

Outfalls in this permit action discharge to receiving waters in State WQS Segment 20.6.4.126 or 20.6.4.128 NMAC that are listed as not supporting one or more designated uses (see 2012 – 2014 State of New Mexico Clean Water Act §303(d)/§305(b) Integrated Report, Appendix A, List of Assessed Surface Waters, USEPA Approved May 8, 2012 (Integrated Report)). Total Maximum Daily Load (TMDL) and Waste Load Allocations are not in place for the Pajarito Plateau, including the receiving waters within LANL.

State WQMP states "*If no TMDL has been established, the permitting authority reviews effluent discharge data to ensure that NPDES permits are protective of water quality standards. For all pollutants that have a reasonable potential to cause or contribute to a violation of a water quality standard, the permitting authority performs calculations or modeling to determine effluent limitations. This review is done in accordance with applicable federal regulations and guidance. Pollutant concentrations above the Minimum Quantification Level (MQL) would be considered to contribute to the impairment.*"

Hardness effluent characteristics, consistent with USEPA reasonable potential analyses in the Fact Sheet, but higher than the concentrations used to determine the probable causes of impairment, have been used to calculate effluent limitations for this certification. The 2012 – 2014 Integrated Report states "*...the availability of concurrent-hardness data needs to be determined and utilized when available to verify any cause(s) of impairment that are a result of applying hardness-dependent criteria.*" In the Pajarito Plateau Assessment for the 2010-2012 Integrated List, a hardness value of 30 milligrams per Liter (mg/L) as $CaCO_3$ was used for acute aquatic life assessments and a hardness value of 62 mg/L as $CaCO_3$ was used for chronic aquatic life assessments to determine the applicable hardness-dependent metals criteria.

Condition #2 (Outfalls 001, 027 & 199, Discharges to Impaired Receiving Waters in 20.6.4.126 NMAC)

Outfalls 001, 027 and 199 discharge to Sandia Canyon in State WQS Segment 20.6.4.126 NMAC. Sandia Canyon from Sigma Canyon to NPDES Outfall 001 is listed as not supporting coldwater aquatic life, livestock watering and wildlife habitat (see 2012 – 2014 Integrated Report). In addition to PCBs, listed Probable Causes of Impairment include aluminum, copper, adjusted gross alpha, and mercury. Part I.A of the Draft Permit did not include monitoring and/or effluent limitations for aluminum, copper, gross alpha – adjusted, or mercury for Outfalls 001, 027 and 199.

Condition #2a (Outfall 001, 027 and 199 Aluminum and Copper Monitoring and Limitations)

For Outfalls 001, 027 and 199, Part I.A of the Final Permit must control aluminum and copper pollutants by the use of effluent limitations based on the most limiting applicable State WQS numeric criteria for the receiving stream in Segment 20.6.4.126 NMAC. For Outfalls 001, 027 and 199, aluminum and copper effluent concentrations from Form 2C of the application are above the respective published MQL and would be considered to contribute to a currently listed impairment. For discharges that contribute to a currently listed impairment, Water Quality Based Effluent Limitations (WQBELs) are required by 40 CFR 122.44(d)(1)(ii) and (iii) and State WQS 20.6.4.8.A.5 and 6 NMAC (Implementation Plan) consistent with the WQMP to ensure that NPDES permits are protective of State WQS. 20.6.4.8 NMAC (2013).

For Outfall 001, potential contaminants listed in the application for the influent of the SWWS plant include Copper Chloride (LANL Application, Volume 2, Outfall 001, Table 4, Page 4 of 21, Volume I, February 2012). For Outfalls 001, 027 and 199, the following is a summary of aluminum and copper effluent concentrations from Form 2C of the application:

	Total Aluminum Effluent Concentration	# of Analysis
001	0.035 mg/L (35µg/L)*	12
027	0.0511 mg/L (51.1 µg/L)*	1
199	0.0157 mg/L (15.7 µg/L)*	1
	Total Copper Effluent Concentration	# of Analysis
001	0.005 mg/L (5 µg/L)*	5
027	0.0024 mg/L (2.4 µg/L)*	1
199	0.0132 mg/L (13.2 µg/L)*	1

*Note: * = Effluent concentration data or detection limit from Form 2C is greater than MQL (aluminum MQL is 2.5µg/L and copper MQL is 0.5 µg/L)*

For Outfalls 001, 027 and 199, the pH limitation in the Draft Permit is a range between 6.6 to 8.8 su (greater than 6.5). Therefore, the following hardness-dependent Chronic Aquatic Life numeric criteria was calculated as described in State WQS 20.6.4.900 NMAC using the Outfall 001 effluent total hardness as $CaCO_3$ of 78.8 mg/L in the application consistent with the USEPA reasonable potential analysis in the Fact Sheet:

	Calculated Chronic Aquatic Life Criteria
Total Recoverable Aluminum	988.9 µg/L (0.9889 mg/L)
Dissolved Copper	7.3 µg/L (0.0073 mg/L)

USEPA may incorporate further limits or restrictions (e.g., incorporate calculated total copper limits in place of dissolved copper, reporting of loading and monthly average, monitoring frequency and sample type), if needed or as appropriate, consistent with the WQMP and NMIP.

NMED believes that requiring a limitation because the discharge would be considered to contribute to a currently listed impairment is an interim waste load allocation. USEPA may choose to include a compliance schedule in the Final Permit to require compliance at the earliest practicable time. The compliance schedule, if incorporated into the Final Permit, must specify milestone dates so as to measure progress towards final project completion (e.g., design completion, construction start, construction completion, date of compliance) consistent with State WQS 20.6.4.12.G NMAC (Compliance with Water Quality Standards, Compliance Schedules).

Condition #2b (Outfall 199 Mercury Monitoring and Limitations)

For Outfall 199, Part I.A of the Final Permit must control mercury by the use of effluent limitations based on the most limiting applicable State WQS numeric criteria for the receiving stream in Segment 20.6.4.126 NMAC. For Outfall 199, mercury effluent concentrations from Form 2C of the application (0.0000106 mg/L (0.0106 µg/L) based on one analysis is above the MQL of 0.005 µg/L and would be considered to contribute to a currently listed impairment. For discharges that contribute to a currently listed impairment, mercury WQBEL are required by 40 CFR 122.44(d)(1)(ii) and (iii) and State WQS 20.6.4.8.A.5 and 6 NMAC (Implementation Plan) consistent with the WQMP to ensure that NPDES permits are protective of State WQS. The following are the applicable numeric criteria in State WQS 20.6.4.900 NMAC:

Pollutant	Designated Use	Numeric Criteria
Total Mercury	Wildlife Habitat	0.77 µg/L
Dissolved Mercury	Chronic Aquatic Life Criteria	0.77 µg/L

which one?

USEPA may incorporate further limits or restrictions (e.g., reporting of loading and monthly average, monitoring frequency and sample type), if needed or as appropriate, consistent with the WQMP and NMIP.

NMED believes that requiring a limitation because the discharge would be considered to contribute to a currently listed impairment is an interim waste load allocation. USEPA may choose to include a compliance schedule in the Final Permit to require compliance at the earliest practicable time. The compliance schedule, if incorporated into the Final Permit, must specify milestone dates so as to measure progress towards final project completion (e.g., design completion, construction start, construction completion, date of compliance) consistent with State WQS 20.6.4.12.G NMAC (Compliance with Water Quality Standards, Compliance Schedules).

Condition #2c (Outfall 001, 027 and 199 Adjusted Gross Alpha Monitoring)

For Outfalls 001, 027 and 199, there were no effluent concentration data for adjusted gross alpha in the application. For pollutants that are Probable Causes of Impairment for which there are no effluent characteristic data, NMED requires confirmation of effluent characteristics, at least one time effluent characteristic monitoring and reporting as soon as practicable with a reopener clause condition, to ensure that the activities authorized in the NPDES permit are protective of applicable State WQS Segment 20.6.4.126 and 20.6.4.900 NMAC consistent with CWA Section 401(d). 20.6.4.900 NMAC (2013).

Condition #3 (Outfalls 13S, 055, 051, 022, 181, 048, 113 & 160, Discharges to Impaired Receiving Waters in 20.6.4.128 NMAC)

Outfalls 13S, 055, 051, 022, 181, 048, 113 and 160 discharge to receiving waters in State WQS Segment 20.6.4.128 NMAC that are listed as not supporting one or more designated uses (see 2012 – 2014 Integrated Report). Except for PCBs, the following is a summary of listed probable causes of impairments for receiving streams from the 2012-2014 Integrated Report:

	Receiving Water or Downstream	Aluminum	Adjusted Gross Alpha	Arsenic	Mercury	Copper	Silver	Zinc
13S	Cañada del Buey	*	*					
051	Mortandad Canyon	*	*			*		
055	Cañon de Valle	*	*					
022	Mortandad Canyon	*	*			*		
181	Mortandad Canyon	*	*			*		
048	Los Alamos Canyon	*	*		*	*		*
113	Sandia Canyon	*	*		*	*		
160	Ten Site Canyon	*	*	*		*	*	*

The following MQLs are published in the NMIP:

	Aluminum	Arsenic	Mercury	Copper	Silver	Zinc
	mg/L / µg/L	mg/L / µg/L	mg/L / µg/L	mg/L / µg/L	mg/L / µg/L	mg/L / µg/L
MQL	0.0025 / 2.5	0.0005 / 0.5	0.000005 / 0.005	0.0005 / 0.5	0.0005 / 0.5	0.020 / 20

The following is a summary of the effluent characteristics from Form 2C of the application:

	Aluminum	Arsenic	Mercury	Copper	Silver	Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
13S	0.059*					
181	0.015*			0.0011*		
048	0.014*		0.0079*	0.0099*	<0.0002	<0.0033
113	0.0557*		0.0000996	0.0032*		
160	<0.068*	0.012*		0.0404*	<0.0002	0.0044

*Note: * = Effluent concentration data or detection limit from Form 2C is greater than MQL*

The following table provides calculated dissolved arsenic and copper concentrations using effluent concentrations from Form 2C of the application and an effluent TSS of 1 mg/L consistent with the USEPA reasonable potential analysis in the Fact Sheet:

	Effluent TSS	Total Arsenic	Calculated Dissolved Arsenic	Total Copper	Calculated Dissolved Copper
	mg/L	mg/L	mg/L	mg/L	mg/L
181	1			0.0011*	0.00054*
048	1			0.0099*	0.0048*
113	1			0.0032*	0.0014*
160	1	0.012*	0.0081*	0.0404*	0.0198*

*Note: * = Effluent concentration data or detection limit from Form 2C is greater than MQL*

No adjusted gross alpha effluent characteristic data were in the application. No data were provided in the application for Outfall 051 and 055. Outfall 022 data were obtained during cooling tower discharge and may not be representative. For Outfall 160, total arsenic effluent limitations based on the modified harmonic low flow consistent with the NMIP were at least as protective of limiting and applicable dissolved arsenic Aquatic Life HH-OO State WQS in 20.6.4.900(J)(2).

Condition #3a (Outfalls 181, 113 & 048 Copper Monitoring and Limitations)

There are no copper effluent limitations for Outfalls 181, 113 and 048 in Part I.A of the Draft Permit. For Outfalls 051 and 160, total copper effluent limitations in the Draft Permit were at least as protective of dissolved copper State WQS using linear coefficient calculations to convert total to dissolved copper and effluent hardness consistent with the USEPA reasonable potential analysis in the Fact Sheet.

For Outfalls 181, 113 and 048, Part I.A of the Final Permit must control copper pollutants by the use of effluent limitations based on the most limiting applicable State WQS numeric criteria for the receiving stream in Segment 20.6.4.128 NMAC. Discharges from Outfalls 181, 113 and 048 are considered to contribute to a currently listed impairment, WQBELs are required by 40 CFR 122.44 (d)(1)(ii) and (iii) and State WQS 20.6.4.8.A.5 and 6 NMAC (Implementation Plan) consistent with the WQMP to ensure that NPDES permits are protective of State WQS.

State WQS 20.6.4.900.H (7) NMAC (Limited Aquatic Life) states *"The acute aquatic life criteria of Subsections I and J of this section apply to this subcategory. Chronic aquatic life criteria do not apply...."* The following are calculated hardness-dependent acute numeric criteria for the receiving stream in State WQS Segment 20.6.4.128 NMAC using the effluent Total Hardness as $CaCO_3$ in the application which is consistent with the USEPA reasonable potential analysis in the Fact Sheet:

	Receiving Stream	Effluent Hardness	Acute Dissolved Copper Aquatic Life Numeric Criteria
181	Mortandad Canyon	84.7 mg/L	0.0115 mg/L (11.5µg/L)
048	Los Alamos Canyon	179 mg/L	0.0233 mg/L (23.3µg/L
113	Sandia Canyon	167 mg/L	0.0218 mg/L (21.8µg/L

USEPA may incorporate further limits or restrictions (e.g., incorporate calculated total copper limits in place of dissolved copper, reporting of loading and monthly average, monitoring frequency and sample type), if needed or as appropriate, consistent with the WQMP and NMIP.

NMED believes that requiring a limitation because the discharge would be considered to contribute to a currently listed impairment is an interim waste load allocation. USEPA may choose to include a compliance schedule in the Final Permit to require compliance at the earliest practicable time. The compliance schedule, if incorporated into the Final Permit, must specify milestone dates so as to measure progress towards final project completion (e.g., design completion, construction start, construction completion, date of compliance) consistent with State WQS 20.6.4.12.G NMAC (Compliance with Water Quality Standards, Compliance Schedules).

Condition #3b (Outfall 048 Mercury Effluent Monitoring and Limitation)

There are no mercury effluent limitation for Outfall 048 in Part I.A of the Draft Permit. For Outfall 048, the mercury effluent concentration from Form 2C of the application is 0.0079 mg/L (7.9 µg/L) based on one analysis, which is above the MQL of 0.005 µg/L, and would be considered to contribute to a currently listed impairment. For discharges that contribute to a currently listed impairment, a mercury WQBEL is required by 40 CFR 122.44(d)(1)(ii) and (iii) and State WQS 20.6.4.8.A.5 and 6 NMAC (Implementation Plan) consistent with the WQMP to ensure that NPDES permits are protective of State WQS. The following are the applicable numeric criteria in State WQS 20.6.4.900.H(7) for limited aquatic life and 20.6.4.900 NMAC:

Pollutant	Designated Use	Numeric Criteria
Total Mercury	Wildlife Habitat	0.77 µg/L
Dissolved Mercury	Acute Aquatic Life Criteria	1.4 µg/L

Both or One
which One?

USEPA may incorporate further limits or restrictions (e.g., reporting of loading and monthly average, monitoring frequency and sample type), if needed or as appropriate, consistent with the WQMP and NMIP.

NMED believes that requiring a limitation because the discharge would be considered to contribute to a currently listed impairment is an interim waste load allocation. USEPA may choose to include a compliance schedule in the Final Permit to require compliance at the earliest practicable time. The compliance schedule, if incorporated into the Final Permit, must specify milestone dates so as to measure progress towards final project completion (e.g., design completion, construction start, construction completion, date of compliance) consistent with State WQS 20.6.4.12.G NMAC (Compliance with Water Quality Standards, Compliance Schedules).

Condition #3c (Outfalls 13S, 181, 113, 048 & 160 Aluminum Monitoring and Limitations)

There are no aluminum monitoring and effluent limitations for Outfalls 13S, 181, 113, 048 and 160 in Part I.A of the Draft Permit. For Outfall 13S, 181, 113, 048 and 160, the aluminum effluent concentrations from Form 2C of the application are above the MQL or the detection limit from Form 2C is greater than MQL of 0.0025 mg/L (2.5 µg/L), and would be considered to contribute to a currently listed impairment. For Outfalls 13S, 181, 113 048 and 160, the Final Permit must control aluminum by the use of effluent limitations based on the applicable State WQS numeric criteria for the receiving stream in Segment 20.6.4.128 NMAC. Total recoverable aluminum WQBELs at least as protective of applicable State WQS are required by 40 CFR 122.44(d)(1)(ii) and (iii) and State WQS 20.6.4.8.A.5 and 6 NMAC and is consistent with the State WQMP.

The acute aquatic life criteria apply to the receiving waters (State WQS 20.6.4.900.H(7) NMAC for Limited Aquatic Life) of Outfalls 13S, 181, 113, 048 and 160. Hardness-dependent Acute Aquatic Life numeric criteria for total recoverable aluminum can be calculated for this permit action as described in State WQS 20.6.4.900 NMAC using the outfall effluent total hardness as $CaCO_3$ in the application consistent with the USEPA reasonable potential analysis in the Fact Sheet. However, for CWA purposes, USEPA did not approve hardness-based equations for aluminum in waters with pH below 6.5 su in State WQS 20.6.4.900 NMAC. The pH limitations in the Draft Permit for receiving waters in Segment 20.6.4.128 NMAC are a range between 6.0 to 9.0 standard unit consistent with the state WQMP. USEPA must incorporate an aluminum effluent limitation that is at least as stringent as state WQS. Requirements for aluminum effluent limitations more stringent than State WQS is not a condition of this certification.

(I give = No eff. limits are provided — want EPA to develop limits for pH etc.)

USEPA may incorporate further limits or restrictions (e.g., reporting of loading and monthly average, monitoring frequency and sample type), if needed or as appropriate, consistent with the WQMP and NMIP.

NMED believes that requiring a limitation because the discharge would be considered to contribute to a currently listed impairment is an interim waste load allocation. USEPA may choose to include a compliance schedule in the Final Permit to require compliance at the earliest practicable time. The compliance schedule, if incorporated into the Final Permit, must specify milestone dates so as to measure progress towards final project completion (e.g., design completion, construction start, construction completion, date of compliance) consistent with State WQS 20.6.4.12.G NMAC (Compliance with Water Quality Standards, Compliance Schedules).

Condition #3d (Outfalls 051, 055 & 022 Aluminum and Outfall 022 Copper Monitoring)

There were no effluent concentration data for aluminum in the application for Outfalls 051, 055 and 022 and there was no representative copper effluent concentration data for Outfall 022. For Outfalls 051, 055 and 022 and to determine effluent characteristics, at least one time representative effluent characteristic analysis monitoring and reporting as soon as practicable for total recoverable aluminum for Outfalls 051, 055 and 022 and copper for Outfall 022 with a reopener clause condition is required in the Final Permit to ensure that Permittee activities authorized in the NPDES permit are protective of applicable State WQS 20.6.4.128 and 20.6.4.900 NMAC consistent with CWA Section 401(d). Additional requirements for effluent characteristic analysis monitoring for Outfalls 051, 055 and 022 are in conditions below.

Condition #3e (Outfalls 13S, 051, 055, 022, 181, 113, 048 & 160 Adjusted Gross Alpha Monitoring)

There were no effluent concentration data for adjusted gross alpha in the application for Outfalls 13S, 051, 055, 022, 181, 113, 048 and 160. For Outfalls 13S, 051, 055, 022, 181, 113, 048 & 160 and to determine effluent characteristics, at least one time representative effluent characteristic analysis monitoring and reporting as soon as practicable for adjusted gross alpha with a reopener clause condition is required in the Final Permit to confirm that Permittee activities authorized in the NPDES permit are protective of applicable State WQS 20.6.4.128 and 20.6.4.900 NMAC consistent with CWA Section 401(d). Additional requirements for effluent characteristic analysis monitoring for Outfalls 051, 055 and 022 are in conditions below.

Condition #4 (Outfall 001, 6T3 Temperature Limitation w/Schedule of Compliance)

Part 1.A for Outfall 001 of the Draft Permit requires monitoring with a daily maximum temperature limit of 24°C. The Final Permit must include additional monitoring and limitations for temperature to protect the designated uses of Coldwater Aquatic Life of the classified receiving stream in Segment 20.6.4.126 NMAC, as described and defined in State WQS 20.6.4.900.H(2) and 20.6.4.7.A(2) NMAC.

State WQS 20.6.4.7 NMAC (Definitions) include:

> *"6T3 temperature" means the temperature not to be exceeded for six or more consecutive hours in a 24-hour period on more than three consecutive days.*
>
> *"Coldwater" in reference to an aquatic life use means a surface water of the state where the water temperature and other characteristics are suitable for the support or propagation or both of coldwater aquatic life.*

20.6.4.7 NMAC (2013).

State WQS 20.6.4.900.H (Aquatic Life) states "*Surface waters of the state with a designated, existing or attainable use of aquatic life shall be free from any substances at concentrations that can impair the community of plants and animals in or the ecological integrity of surface waters of the state....the specific*

criteria for aquatic life subcategories...apply...(2) NMAC for Coldwater Aquatic Life states "...6T3 temperature 20°C (68°F), maximum temperature 24°C (75°F)... Where a single segment-specific temperature criterion is indicated in 20.6.4.101-899 NMAC, it is the maximum temperature and no 6T3 temperature applies.

The following additional limitations, measurement frequency and sample type must be incorporated into the Final Permit:

Pollutant	Limitation	Measurement Frequency	Sample Type
Temperature	6T3 Temperature of 20°C (68°F) shall not be exceeded for six or more consecutive hours in a 24-hour period on more than three consecutive days.	While discharging, measurement of temperature must be at a frequency not to exceed 1/hr.	Grab

NMED recognizes that new or updated temperature monitoring instrumentation and/or procedures and operational changes may be needed to meet the 6T3 temperature limitations for discharges from Outfall 001 to the effluent-dominated receiving stream. Therefore, USEPA may choose to include a compliance schedule in the Final Permit to require compliance at the earliest practicable time. The compliance schedule, if incorporated into the Final Permit, must specify milestone dates so as to measure progress towards final project completion (e.g., design completion, construction start, construction completion, date of compliance) consistent with State WQS 20.6.4.12.G NMAC. Report format for monitoring and compliance could be addressed by USEPA during the completion of the milestones of a compliance schedule.

Condition #5 (Outfall 022, Effluent Monitoring and Limitaitons, Total Residual Chlorine)

The 2007 Permit authorized discharge of cooling tower blowdown and other wastewater at Outfall 022. Among other monitoring and limitations in the 2007 Permit, Outfall 022 had a Total Residual Chlorine (TRC) effluent limitation of 11 µg/L. In Part I.A of the Draft Permit, USEPA describes the authorized discharge from Outfall 022 as stormwater and roof drain water. The application as confirmed in the Permittees' comments to USEPA include the discharge of emergency once through cooling potable water. It is NMED's understanding that chlorine in the potable water once through may not have time to dissipate and would have a reasonable potential to exceed State WQS at the point of discharge. Therefore, a TRC WQBEL is required by 40 CFR 122.44(d)(1)(ii) and (iii) and State WQS 20.6.4.8.A.5 and 6 NMAC (Implementation Plan) consistent with the WQMP to ensure that NPDES permits are protective of State WQS if USEPA authorizes the discharge of once through cooling potable water in the Final Permit.

If USEPA authorizes the discharge of once through cooling potable water in this permit action, then Part I.A of the Final Permit for Outfall 022 must also control TRC by the use of effluent limitations based on the most limiting applicable State WQS numeric criteria in 20.6.4.900 NMAC for the receiving stream in Segment 20.6.4.128 NMAC when Outfall 022 discharges once through cooling potable water. The following are the applicable and limiting numeric criteria in State WQS 20.6.4.900 NMAC:

which value ?

	Wildlife Habitat	Acute Aquatic Life
Total Residual Chlorine	11 µg/L	19 µg/L

Condition #6 (Outfalls 051, 055 and 022, Effluent Characteristic Analysis Monitoring and Reporting)

As previously stated in above conditions, no effluent characteristic data were provided in the application for Outfall 051 and 055. Outfalls 051 and 055 have not recently discharged. Based on information in the application, previous data for Outfall 022 may no longer be representative of the discharges. Therefore, USEPA has not determined whether there is a reasonable potential for representative discharges to exceed State WQS. Additional monitoring is required to determine if additional effluent limitations are required per 40 CFR 122.44(d)(1)(i). For Outfalls 051, 055 and 022, the Final Permit must include at least one time

representative effluent characteristic monitoring and reporting as soon as practicable with a reopener clause condition to ensure that Permittee activities authorized in the NPDES permit are protective of applicable State WQS 20.6.4.128 and 20.6.4.900 NMAC consistent with CWA Section 401(d).

USEPA must require effluent characteristic analysis monitoring, and may choose to require all required pollutants on NPDES Application Form 2C or the list of pollutants used to determine reasonable potential. In addition to the condition of certification for monitoring of adjusted gross alpha, total recoverable aluminum (Outfalls 051, 055 and 022) and copper (Outfall 022) discussed above, the Final Permit must include effluent characteristic analysis monitoring for persistent Aquatic Life Human Health-Organism Only criteria. State WQS 20.6.4.11.G states *"Human health-organism only criteria in Subsection J of 20.6.4.900 NMAC apply to those waters with a designated, existing or attainable aquatic life use."* For human health data requirements, the NMIP states *"Data submitted for human health parameters shall analyze the applicable parameters, and not use "believed absent" in reporting results. The analytical results must be tested to the MQL...."* Consistent with the NMIP for non-perennial waters, the following pollutants, if there are no effluent limitations in the Final Permit, must be analyzed and reported (note "(D)" means dissolved) when a discharge from Outfalls 051, 055 and/or 022 occurs:

Antimony, (D)	Zinc, (D)	Dieldrin
Arsenic, (D)	Aldrin	2,3,7,8-TCDD dioxin
Nickel, (D)	Benzo (a) pyrene	Hexachlorobenzene
Selenium, (D)	Chlordane	PCBs
4,4' -DDT and derivatives	Tetrachloroethylene	Thallium, (D)

None of the above-listed pollutants have effluent limitations in the Draft Permit for Outfall 055 and Outfall 022. However, total zinc, total nickel, total selenium and PCBs have monitoring and effluent limitations in the Draft Permit; therefore, additional effluent characteristic analysis would not be a condition of certification unless there is a change in the pollutants limited for Outfall 051 in the Final Permit.

Condition #7 (Outfall 051, Effluent Limitations, Hardness-Based Metals, Lead)

Effluent limitations for lead in Part 1.A of the Draft Permit for Outfall 051 must ensure protection of applicable and limiting State WQS numeric criteria for the receiving stream in Segment 20.6.4.128 NMAC. The following is a summary of a portion of the monitoring and effluent limitation conditions for lead in Part I.A of the Draft Permit for Outfall 051:

		Concentration	
		Monthly Average	Daily Maximum
		mg/L	mg/L
051	Total Lead	0.423	0.524

The total lead limitations in the Draft Permit would exceed the calculated applicable dissolved lead Acute Aquatic Life State WQS numeric criteria in 20.6.4.900 NMAC at the total hardness required in the Draft Permit (50 mg/L or greater). Dissolved hardness to total hardness is assumed to be a 1:1 ratio consistent with USEPA reasonable potential analyses in the Fact Sheet. Using a dissolved hardness as $CaCO_3$ of 50 mg/L, the dissolved lead Acute Aquatic Life numeric criteria presented in the table in State WQS 20.6.4.900(I)(3) NMAC is 0.030 mg/L (30 µg/L). USEPA must change lead limitations (calculated total lead and/or dissolved lead) that are at least as stringent as applicable and limiting State WQS numeric criteria for dissolved lead. Total 115/78 ug/l

Condition #8 (Outfall 051, Effluent Limitations, Hardness-Based Metals, Chromium)

No effluent characteristic data were provided in the application for Outfall 051 for chromium III or VI. The following is a summary of a portion of the monitoring and effluent limitation conditions for chromium in Part I.A of the Draft Permit for Outfall 051:

		Concentration	
		Monthly Average	Daily Maximum
		mg/L	mg/L
051	Total Chromium	1.34	2.68

The following are the applicable chromium numeric criteria for receiving waters in Segment 20.6.4.128 NMAC in State WQS 20.6.4.900 NMAC:

Pollutant	Livestock Watering	Aquatic Life Acute
Chromium III, dissolved		a
Chromium VI, dissolved		16 µg/L / 0.016 mg/L
Chromium, dissolved	1,000 µg/L	

Note: a = Hardness Dependent

Using a dissolved hardness as $CaCO_3$ of 50 mg/L, the dissolved chromium III Acute Aquatic Life numeric criteria presented in the table in State WQS 20.6.4.900(I)(3) NMAC is 0.320 mg/L (320 µg/L). Using linear coefficient equations and a TSS effluent concentration of 1.0 mg/L consistent with USEPA reasonable potential analysis in the Fact Sheet, the total chromium monthly average of 1,340 µg/L and daily maximum of 2,680 µg/L limitations converted to dissolved chromium III are 307 and 615 µg/L, respectively. Depending upon the speciation (portion of the total chromium concentration that may be chromium III , chromium VI, or both), the total chromium daily maximum effluent limitation could exceed Acute Aquatic Life State WQS for dissolved chromium VI and chromium III at the hardness limitation in the Draft Permit.

It has not been determined that the effluent limitation for chromium in the Draft Permit at a hardness limitation in the Draft Permit would exceed applicable and limiting State WQS for dissolved chromium III and dissolved chromium VI at this time. However, additional effluent characteristic analysis monitoring to determine if lower or additional effluent limitations are required per 40 CFR 122.44(d)(1)(i) consistent with CWA Section 401(d) must be included in the Final Permit for Outfall 051. For Outfall 051, the Final Permit must include at least one time representative effluent characteristic analysis monitoring when Outfall 051 discharges for both chromium III and chromium VI and reporting as soon as practicable with a reopener clause condition to ensure that the Permittees' activities authorized in the NPDES permit are protective of applicable State WQS 20.6.4.128 and 20.6.4.900 NMAC.

Condition #9 (Additional Effluent Characteristic Analysis Monitoring for Chromium)

No effluent characteristic data were provided in the application for chromium VI. USEPA reasonable potential analysis in the Fact Sheet did not compare available total chromium effluent data to dissolved chromium VI State WQS criteria. The following table summarizes total chromium effluent concentrations from Form 2C of the application greater than the chromium MQL of 10 µg/L:

	Total Chromium Effluent Concentration (Ce)	2.13 x Ce
	µg/L	µg/L
027	12	25.56
048	11.4	24.282
160	30.4	64.752

The ratio of total chromium to dissolved chromium, and total chromium VI to dissolved chromium VI is 1:1 consistent with the NMIP. If all total chromium in the effluent is dissolved chromium VI; then effluent characteristics of Outfall 160 of 30.4 µg/L would exceed state WQS in 20.6.4.900 for dissolved chromium VI of 16 µg/L. If all total chromium in the effluent is dissolved chromium VI; then effluent characteristics of

Outfalls 027, 048 and 160 using the current 2.13 factor used by USEPA to determine the reasonable potential would have a reasonable potential to exceed State WQS for dissolved chromium VI in 20.6.4.900(J)(2).

It has not been determined that the effluent limitation for chromium in the Draft Permit would exceed applicable and limiting State WQS for dissolved chromium VI at this time. However, additional effluent characteristic analysis monitoring to determine if additional effluent limitations are required per 40 CFR 122.44(d)(1)(i) consistent with CWA Section 401(d) must be included in the Final Permit for Outfall 027, 048 and 160. For Outfalls 027, 048 and 160 051, the Final Permit must include at least one time representative effluent characteristic analysis monitoring for chromium VI and reporting as soon as practicable with a reopener clause condition to ensure that the Permittees' activities authorized in the NPDES permit are protective of applicable State WQS in 20.6.4.126 (Outfall 027), 20.6.4.128 (Outfalls 048 and 160) and 20.6.4.900 NMAC.

Condition #10 (Add Effluent Limitations if Reasonable Potential to Exceed State WQS, Additional Data submitted by Permittee)

USEPA reasonable potential analysis in the Fact Sheet indicated that for Outfall 027, effluent concentrations for total recoverable selenium had a reasonable potential to exceed State WQS, but those pollutants did not have effluent limitations in the Draft Permit. For Outfall 048, arsenic and total recoverable selenium had a reasonable potential to exceed State WQS, but those pollutants did not have effluent limitations in the Draft Permit. In addition to the monitoring and limitations in Part 1.A, or as required as a condition of certification, the Final Permit must control all pollutants that have a reasonable potential to exceed State WQS by the use of effluent limitations based on the most limiting applicable State WQS numeric criteria for the applicable receiving stream, in this case Segment 20.6.4.126 or Segment 20.6.4.128 NMAC, as appropriate. USEPA may update Reasonable Potential Analyses to incorporate additional representative data (e.g., cyanide or selenium) provided by the Permittees using approved test procedures or test procedures authorized in the previous permit (e.g., selenium using SW-846-772) consistent with the WQMP and NMIP to determine the need for effluent limitations in the Final Permit.

027

648 for 13.45 / 13.32 µg/L

Comments That Are Not Conditions Of Certification

Comment #1 (Monitoring Frequency)

In Part I.A of the Draft Permit discharges from the Radioactive Liquid Waste Treatment Facility (TA-50) at Outfall 051 are monitored at a frequency of only 2/term for PCBs, cadmium, mercury, nickel, and selenium. NPDES Regulations in 40 CFR 122.44(i)(2) states *"...requirements to report monitoring results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once a year."* NMED requests USEPA require a monitoring frequency for Outfall 051 of no less than once per year for PCBs, cadmium, mercury, nickel, and selenium. NMED requests that any case by case reasons for reducing the frequency found in NMIP Table 10 be documented in the Response to Comments for the Final Permit.

Comment #2 (Outfalls 027 and 199, Rerun Reasonable Potential to Downstream Water, if needed include Limitations)

NMED supports USEPA conducting a reasonable potential analysis for discharges from Outfall 199 that will reach a downstream water in Segment 20.6.4.126 NMAC. The reasonable potential analyses for Outfalls 027 and 199 should have also included effluent characteristics of Outfall 001 as ambient stream concentrations. NMED requests USEPA re-run the analysis with the additional data. If pollutants have a reasonable potential to exceed state WQS, then any additional WQBELs would need to be incorporated into the Final Permit.

Comment #3 (Reopener Clause)

Part II.E (Reopener Clause) of the Draft Permit states:

> *The permit may be reopened and modified during the life of the permit, in accordance with provisions in 40 CFR 122.62.*
>
> *The permit may also be reopened and modified if the U.S. Fish and Wildlife Service determines that more stringent permit conditions are necessary to protect federally listed endangered species.*

The Final Permit should have additional language to clarify the reopener clauses. NMED requests USEPA to include the following language in the Final Permit:

> *The permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised or remanded by the New Mexico Water Quality Control Commission. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the Water Quality Standards are either revised or promulgated by the New Mexico Environment Department. Should the State adopt a State water quality standard, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard in accordance with 40 CFR 122.44(d). Modification of the permit is subject to the provisions of 40 CFR 124.5.*
>
> *The listing of the receiving stream on the State 303 (d) list of impaired waters categorizes the receiving water as water quality limited; however, no new requirements have yet been established for this facility. If final effluent limitations are established in an approved TMDL and updated Water Quality Management Plan (WQMP) and if they are more stringent than those listed in this permit, or controls a pollutant not listed in this permit, then the permit may be modified or revoked and reissued to conform with the approved TMDL and WQMP final effluent limitations."*
>
> *In accordance with 40 CFR Part 122.62(s)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the*

application of different permit conditions at the time of permit issuance. New information includes results obtained from effluent characteristic analysis monitoring of this permit. The permit may be modified or revoked if monitoring demonstrates a potential to exceed State of New Mexico Water Quality Standards for the protection of applicable designated use numeric criteria.

Comment #4 (USEPA Response to DOE/LANS Comments)

NMED has reviewed comments made to USEPA Region 6 during the public comment period which include comments and additional data from the Department of Energy and Los Alamos National Security, LLC (DOE/LANS). A summary of DOE/LANS requests for changes in the Final Permit include, but are not limited to:

General Comments
- Exclude use of EPA Method 1668 for compliance purposes
- Request inclusion of schedules for compliance
- Delete selenium requirements at Outfalls 03A027, 03A048, and 03A199. Submitted additional selenium data using SW 846 Method 7742 (included in Section G. Test Methods in Part II of the current permit)
- Delete electronic reporting
- Reduce sampling frequencies at Outfalls 051 and 03A160 to once- per-week
- Delete WET monitoring and reporting requirements for Outfalls 001, 03A027, 03A160, and 03A199 based on past WET testing results
- Change 24-hour notification and a 7-day reporting requirements for overflows
- Request to not add any new effluent limits for Outfalls 05A055 and 051

Outfall 001:
- Support no aluminum monitoring and reporting requirements
- Delete WET monitoring and reporting requirements based on past WET testing results

Outfall 13S:
- Request Latitude/Longitude modification
- Request correction to outfall identification
- Submitted additional information on biosolid management. Request no change.

Outfall 051:
- Submitted additional information on WET testing results to clarify fact sheet
- Request correction to outfall identification
- Request change in flow monitoring requirements to an estimate/once-per-day basis.
- Request definition of "estimate" for Outfall 03A022 be incorporated
- Request sampling frequencies for copper, zinc and hardness changed to once-per-week.
- Request 3-hr. composite WET test be replaced with a grab sample requirement

Outfall 05A055:
- Retain "Estimate" for the flow monitoring requirement

Outfall 03A022:
- Request once through cooling in discharge description (for emergency use only)
- Request outfall be renamed "04A022"

Outfall 03A027:
- Delete selenium monitoring and reporting requirements or effluent limits.
- Delete WET monitoring and reporting requirements for Outfall 03A027
- Delete reference to cooling tower TA3-285.
- Reduce sample frequency for E Coli to two-per-month as indicated in the fact sheet.

Outfall 03A048:

- Delete selenium monitoring and effluent limits

Outfall 03A160:

- Delete cyanide requirements or requests reduction in sampling frequency to once-per-week
- Reduce copper sampling frequency to once-per-week.
- Delete WET monitoring and reporting requirements based on past WET testing results

Outfall 03A199:

- Delete selenium monitoring and reporting requirements or effluent limits
- Submitted corrections to cyanide data in the USEPA Fact Sheet. Reasonable potential calculation sheet is 13.6 µg/l. Application documents a non-detect analytical result for cyanide of < 1.5 µg/l.
- Acknowledges reasonable potential for copper at Outfall 03A199
- Delete WET monitoring and reporting requirements based on past WET testing results

Conditions cited in the Draft Permit and the State certification shall not be made less stringent by changes made by USEPA in the Final Permit per 40 CFR 124.55. Before incorporation of changes to monitoring and/or effluent limitations in the Final Permit as a result of public and/or Permittee comments to USEPA, USEPA needs to verify that calculations, effluent limitations, monitoring conditions are consistent with the WQMP and NMIP. NMED SWQB requests that USEPA provide the final calculations used to determine effluent limitations in the Final Permit in their Response to Comments. NMED will review any changes between the Draft Permit and the Final Permit to determine if modifications (revision or addition) to this State conditional certification are warranted consistent with 40 CFR 124.53 and State WQS.